## **CLAIMS**

## WHAT IS CLAIMED IS:

1. A method of transmitting data, the method comprising the steps of: providing a group of data;

minimizing a probability of occurrence of a group of N binary values in the group of data; and

assigning an elevated electromagnetic pulse transmission rate to at least one group of N binary values having an elevated probability of occurrence.

- 2. The method of claim 1, wherein the step of minimizing the probability of occurrence of the group of N binary values comprises eliminating the group of N binary values from the group of data.
- 3. The method of claim 1, wherein the step of minimizing the probability of occurrence of the group of N binary values comprises:

eliminating the group of N binary values from the group of data so that only  $2^{X}-1$  groups of N binary values are assigned to an elevated electromagnetic pulse transmission rate.

- 4. The method of claim 1, wherein the group of N binary values is a group of bits selected from a group consisting of: a 4-bit group, a 6-bit group, a 8-bit group, a 16-bit group, a 32-bit group, a 64-bit group and a 128-bit group.
- 5. The method of claim 1, wherein the elevated electromagnetic pulse transmission rate may range between about 100 million pulses per second to about 1 billion pulses per second.

5

10

- 6. The method of claim 5, wherein the pulses are selected from a group consisting of: ultra-wideband pulses and impulse radio pulses.
- 7. The method of claim 1, wherein the transmitted data is selected from a group consisting of: telephony data, high-speed data, video data, television data, Internet communication data and audio data.
- 8. The method of claim 1, wherein the data is transmitted through a media that is selected from a group consisting of: air, an optical fiber ribbon, a fiber optic cable, a single mode fiber optic cable, a multi mode fiber optic cable, a twisted pair wire, an unshielded twisted pair wire, a plenum wire, a PVC wire, a coaxial cable, and an electrically conductive material.
- 9. The method of claim 1, wherein the data is transmitted substantially simultaneously with a wire network communication signal.
- 10. A computer program product for directing a general purpose digital computer to perform a desired function comprising:

a set of computer readable instructions for minimizing a probability of occurrence of a group of N binary values in a group of data; and

a set of computer readable instructions for assigning an elevated electromagnetic pulse transmission rate to at least one group of N binary values having an elevated probability of occurrence.

35

1921320.1

5

10

- 11. The computer program product of claim 10, wherein minimizing the probability of occurrence of the group of N binary values comprises a set of computer readable instructions for eliminating the group of N binary values from the group of data.
- 12. The computer program product claim 10, wherein minimizing the probability of occurrence of the group of N binary values comprises:

a set of computer readable instructions for eliminating the group of N binary values from the group of data so that only  $2^{X}$  –1 groups of N binary values are assigned to an elevated electromagnetic pulse transmission rate.

- 13. The computer program product of claim 10, wherein the group of N binary values is a group of bits selected from a group consisting of: a 4-bit group, a 6-bit group, a 8-bit group, a 16-bit group, a 32-bit group, a 64-bit group and a 128-bit group.
- 14. The computer program product of claim 10, wherein the elevated electromagnetic pulse transmission rate may range between about 100 million pulses per second to about 1 billion pulses per second.
- 15. The computer program product of claim 14, wherein the pulses are selected from a group consisting of: ultra-wideband pulses and impulse radio pulses.
- 16. A method of transmitting data, the method comprising the steps of:means for providing a group of data;

means for minimizing a probability of occurrence of a group of N binary values in the group of data; and

1921320.1

5

10

15

means for assigning an elevated electromagnetic pulse transmission rate to at least one group of N binary values having an elevated probability of occurrence.

- 17. The method of claim 16, wherein the step of means for minimizing the probability of occurrence of the group of N binary values comprises means for eliminating the group of N binary values from the group of data.
- 18. The method of claim 16, wherein the step of means for minimizing the probability of occurrence of the group of N binary values comprises:

eliminating the group of N binary values from the group of data so that only  $2^{X}-1$  groups of N binary values are assigned to an elevated electromagnetic pulse transmission rate.

19. The method of claim 16, wherein the group of N binary values is a group of bits selected from a group consisting of: a 4-bit group, a 6-bit group, a 8-bit group, a 16-bit group, a 32-bit group, a 64-bit group and a 128-bit group.

37

5